

Communication

Epidemiologists Put Social Media in the Spotlight



Although skepticism still exists, a growing number of researchers are advocating for better utilization of social media tools to help track epidemics and improve response times. The International Conference on Digital Disease Detection was held recently at Harvard Medical School to discuss ways in which this informal data can change

disease surveillance, as well as concerns that may exist with using these methods. Software such as BioCaster addresses some of these concerns by filtering data in a way that makes it more useful.

The February Issue of Health Communication Science Digest is Now Available

You can access all issues of the Health Communication Science Digest series online. This month in the Health Communication Science Digest you'll find: several aspects of risk communication are highlighted, several authors examine components of health message design and presentation, effective health communication interventions are outlined in several studies, two studies highlight the potential of new media in epidemiological and demographic investigation, and public health advocacy and policy are the focus of two studies.

Research

Using Genotyping and Geospatial Scanning to Estimate Recent *Mycobacterium tuberculosis*

To determine the proportion of reported tuberculosis (TB) cases due to recent transmission in the United States, the CDC conducted a cross-sectional study to examine culture-positive TB cases with complete genotype results (spoligotyping and 12-locus mycobacterial interspersed repetitive unit-variable-number tandem repeat typing) reported during January 2005–December 2009. Recently transmitted cases were defined as cases with matching results reported within statistically significant geospatial zones (identified by a spatial span statistic within a sliding three-year window). Approximately one in four TB cases reported in the United States may be attributed to recent transmission. Groups at greatest risk for recent transmission appear to be men, persons born in the United States, members of a minority race or ethnic group, persons who abuse substances, and the homeless. Understanding transmission dynamics and establishing strategies for rapidly detecting recent transmission among these populations are essential for TB elimination in the United States.

News

Whooping Cough Vaccine Recommended for Seniors

Now just about everybody should be getting vaccinated against whooping cough. Advisers to the Centers for Disease Control and Prevention are recommending all adults 65 and older be immunized against whooping cough, or pertussis.

Nasty, Contagious Norovirus is 'Everywhere' Now

It has been a busy season for the "stomach flu," that nasty, highly contagious bug that has led officials from California to Washington, D.C., to close schools, issue alerts and launch massive cleaning efforts.

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Majority of Dairy-Related Disease Outbreaks Linked to Raw Milk

The rate of outbreaks caused by unpasteurized milk (often called raw milk) and products made from it was 150 times greater than outbreaks linked to pasteurized milk, according to a study by the Centers for Disease Control and Prevention. The 13-year review also revealed that the states where the sale of raw milk was legal had more than twice the rate of outbreaks as states where it was illegal.



Neonatal Outcomes After Influenza Immunization During Pregnancy: A Randomized Controlled Trial

Researchers in the Canadian Association of Medicine Journal study the effects of influenza vaccination during pregnancy on neonates. They analyzed data from the MothersGift project which collected data from 340 pregnant women in Bangladesh who received influenza or pneumococcal vaccines. They then compared this data to the health of the newborn. The research showed that influenza immunization was associated with healthy birth weight in newborns. The authors conclude that more study needs to be done on this issue, but suggest influenza vaccination promotes intrauterine growth.

Accuracy of Rapid Influenza Diagnostic Tests

Researchers in the Annals of Internal Medicine study the accuracy of rapid influenza tests. They performed a meta-analysis where they collected 159 studies from PubMed and EMBASE databases that all concerned rapid influenza diagnostic tests. The authors then compared the studies by what type of rapid influenza diagnostic testing method they tested followed by sensitivity and specificity. The research showed there was not enough information in the studies to provide accurate sensitivity and specificity information. The authors conclude from the data collected, the rapid influenza diagnostic tests could rule in, but not rule out influenza infection.



Disease Sleuths Surf for Outbreaks Online

Many folks who wake up feeling crummy will sit down with a computer or smartphone before they sit down with a doctor. They might search the Web for remedies or tweet about their symptoms. And that's why scientists who track disease are turning to the Internet for early warning signs of epidemics. Watch this clever video from NPR.

Risk assessment: Laboratory-created A(H5N1) Viruses Transmissible Between Ferrets

The European Centers for Disease Control (ECDC) published a report on the risk of laboratory-created H5N1 influenza virus being transmissible between humans. The report summarizes and explains the complex public health and scientific issues around the current developments in regards to H5N1 research. The ECDC indicates that the agency advocates for full publication of both H5N1 research study articles.

Two New Commentaries On Working Safely With The H5N1 Virus In A Lab

The journal mBio published two new commentaries focused on lab safety and the H5N1 virus:

Biosafety Considerations of Mammalian-Transmissible H5N1 Influenza - The authors suggest the H5N1 viruses only be studied in BioSafety Level 4 labs until its transmissibility to humans is better understood.

Working Safely With the H5N1 Virus - The authors argue that only the minimum laboratory safety level be used when working with H5N1. Working under BioSafety Level 4 conditions may be too restrictive when working with H5N1.

Homeland Security

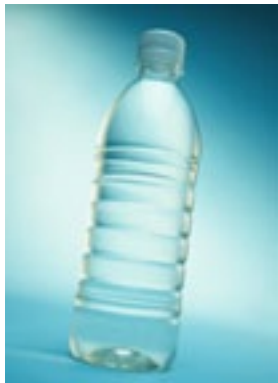
Comment on the National Planning Frameworks and the Recovery Interagency Operational Plan

Please visit www.fema.gov/ppd8 to provide input on four working drafts of the National Planning Frameworks, and the initial draft of the recovery Federal Interagency Operational Plan, which are part of Presidential Policy Directive 8 (PPD – 8): National Preparedness. FEMA requests your participation as another opportunity to broaden engagement in the implementation of PPD-8.

U.S. GAO – National Preparedness: Countermeasures for Thermal Burns

Multiple organizations have raised concerns about HHS's ability to work with industry to successfully develop and acquire medical countermeasures to respond to CBRN incidents and other terrorist threats. Since 2004 congressional committees have held several hearings to assess HHS's medical countermeasure development and acquisition efforts. Congress requested an examination to see whether HHS has developed and acquired medical countermeasures that address thermal burn injuries that would result from conventional explosives, radiological, or nuclear devices. The review addresses (1) the medical countermeasures in the SNS that would address thermal burns, (2) the steps HHS has taken to obtain information about and inform industry of its interest in additional countermeasures for thermal burns, and (3) the medical countermeasures in the pipeline for development and acquisition into the SNS that could serve to address thermal burns. GAO does not make any recommendations in this report.

U.S. Water Shortages Loom



More than one in three counties in the United States could face a "high" or "extreme" risk of water shortages due to climate change by the middle of the twenty-first century, according to a new study in the American Chemical Society's (ACS) journal *Environmental Science & Technology*. Homeland Security Newswire said February 24, the new report concluded seven in ten of the more than 3,100 U.S. counties could face "some" risk of shortages of fresh water for drinking, farming, and other uses. An American Chemical Society release reports that population growth is expected to increase the demand for water for municipal use and for electricity generation beyond existing levels. Global climate change threatens to reduce water supplies due

to decreased rainfall and other factors compared to levels in the twentieth century. The group developed a "water supply sustainability risk index" that takes into account water withdrawal, projected growth, susceptibility to drought, projected climate change, and other factors in individual U.S. counties for the year 2050. It takes into account renewable water supply through precipitation using the most recent downscaled climate change projections and estimates future withdrawals for various human uses. The team used the index to conclude climate change could foster an "extreme" risk of water shortages that may develop in 412 counties in southern and southwestern states and in southern Great Plains states.

Regional News

Region 1 Updates

The District 1 Regional Medical Response Coalition (D1RMRC), conducted the 10th Annual Weapons of Mass Destruction (WMD)/Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Emergency Preparedness Symposium. The February 16th event was held at the Michigan State University Kellogg Center and was planned in coordination with the Region 1 Homeland Security Planning Board.



This year's attendance was the largest in recent years with over 200 participants attending from a broad cross-section of disciplines. This year's theme, "A Decade Later: Bringing the Disaster Home," reflected on the regional healthcare coalition's growth, and how our programs might perform in disaster incidents. D1RMRC brought individuals involved with the Joplin Tornado incident. In addition to their moving presentations, the symposium followed the incident through the different stages of response. The early hospital and EMS response was followed by insight into the behavioral health needs and the developing public health concerns. In addition to the local response, the involvement and action from the state organizations was discussed. For the annual "threats and risks" update, the Cyberterrorism expert from the FBI discussed the evolving threat. Completing the morning program was a moving presentation by the CEO of a hospital that had an "active shooter" incident at his hospital that resulted in multiple fatalities. In addition to reliving the painful moments of that day, he went through some of the lessons learned and provided recommendations for others to help mitigate this type of incident. A new symposium format introduced this year had each speaker provide a brief introduction to their topic. This provided the foundation for an afternoon session allowing them to go into greater detail and answering questions on their particular area. This also provided attendees an opportunity to ask how planning and protocols may have been utilized during the incident. The format was well received by the attendees. The working lunch included introduction of the Michigan Rural Hospital Incident Command System (Mi-HICS) and the Region1 Behavioral Health Disaster Response Protocol. The end of the day was marked by the annual planning meeting of both planning boards. The work is already underway for next year's event.

With Spring around the corner the exercise schedule ramps up for D1RMRC with the return of the DIREPLAY series. Exercises are planned at multiple hospitals. The annual CHEMDOT exercise at the MSU pavilion which brings in all region's Mobile Medical CBRNE Support Units. The PHARMEX 2012 will test hospital SNS plans while using a scenario based response.

The educational menu is equally robust. In March the CISM-LODD (Line of Duty Death) advanced training will be brought to the region. The hospital first receiver decontamination training and radiation exposure training will also be conducted. In April, the Texas Engineering Extension Service (TEEX) will present "Disaster Preparedness for Hospitals and Healthcare Organizations within the Community Infrastructure" course. Contact the [D1RMRC office](#) for any information regarding training and education.

National News

New York Overhauls Emergency Response Capabilities Post-Irene

In the wake of lessons learned from Hurricane Irene, New York Governor Andrew Cuomo has proposed [several key initiatives](#) to improve the state's emergency response capabilities. In his announcement last week, Cuomo proposed creating five Regional Disaster Logistics Centers that will stockpile equipment and serve as staging grounds to ensure resources are in place prior to an emergency. He also proposed the creation of a new state emergency database, and has ordered the state to take an inventory of all emergency response gear so that unnecessary or outdated equipment may be sold.

A Peek into the Future of Emergency Management Solutions

[An interview](#) with Knowledge Center's Chief Operating Officer, John Degory, provides insight into the emerging technologies in emergency management. Knowledge Center is a private technology company located in Pittsburg that works closely with the emergency management community in southwestern Pennsylvania. Degory addresses topics such as considerations to be made before implementing an Emergency Operations Center (EOC) information management system, and the role of social media.

Investigation Announcement: Multistate Outbreak of Shiga Toxin-producing *Escherichia coli* O26 Infections Linked to Raw Clover Sprouts at Jimmy John's Restaurants

CDC is collaborating with public health officials in multiple states and the U.S. Food and Drug Administration (FDA) to investigate a [multistate outbreak](#) of Shiga toxin-producing *Escherichia coli* serogroup O26 (STEC O26) infections likely linked with eating raw clover sprouts.

Tools & Resources

Georgia Tech Develops Software for the Rapid Analysis of Foodborne Pathogens

Georgia Tech's School of Biology Associate Professor King Jordan and graduate students collaborated with the CDC to [develop software](#) that can help characterize pathogens that cause bacterial outbreaks. The software includes an integrated suite of computational tools that analyze microbial genome sequences. This information shows promise for supporting more efficient outbreak investigations in the future.

PAHO, CDC Publish Guide on Preparing for Chikungunya Virus Introduction in the Americas

The Pan American Health Organization/World Health Organization (PAHO/WHO) collaborated with the Centers for Disease Control and Prevention (CDC) to develop new preparedness and response guidelines for the chikungunya virus. Although the virus has yet to spread to the Western Hemisphere, experts have identified a clear risk of it being introduced into local mosquito populations. [Click here](#) to view the report.

Apply to host a CDC-paid Public Health Associate

The Public Health Associate Program provides a pipeline of field-tested, experienced, and passionate public health professionals. Associates in this two-year fellowship program are entry-level public health professionals placed in state, tribal, local or territorial public health agencies to gain broad experience in public health program operations. Associates also can

fill gaps in agencies affected by budget cuts and staffing shortages. Today, 120 associates work in host sites across the country, including several tribal departments. Applications to be a 2012 host site close March 14 at 11:59 p.m. (EST). For more details, contact Denise Freeman, PHAP Supervisor, at 404-498-0441 or dlj9@cdc.gov or visit the [PHAP website](#).

Future of Public Health Award Now Accepting Applications

The Public Health Foundation (PHF) has launched a national award program to promote use of quality improvement (QI) to influence positive outcomes in Winnable Battles. The [Future of Public Health Award](#) (FPHA) is a unique opportunity for state, tribal, local, and territorial health departments to receive onsite technical assistance to build capacity in QI and advance programs to improve outcomes in Winnable Battles. The Award recognizes promising proposed initiatives in public health that utilize QI to influence positive outcomes in Winnable Battles. Winnable Battles are defined by the Centers for Disease Control and Prevention (CDC) as public health priorities that have a large-scale impact on the public's health in a relatively short timeframe. Award recipients will receive: Up to three days of on-site technical assistance and training in basic to advanced QI tools and methods, QI resource materials (e.g., course materials, case-study examples, articles on best-practices), a spotlight feature on PHF's webpage, a featured article in PHF's E-newsletter, and much more.

The deadline for applications is Friday, March 16, 2012.

This initiative is funded through a cooperative agreement with the Centers for Disease Control and Prevention (CDC) to Strengthen and Improve the Nation's Public Health Capacity through National, Non-Profit, Professional Public Health Organizations to Increase Health Protection and Health Equity.

New From the National Institute on Drug Abuse: Substance Abuse Treatment Resource Guide

Treatment for drug abuse is never a one-size-fits-all process, and finding the right treatment for a person's specific needs is critical to success. However, trying to identify the right treatment program for a friend, colleague, or loved one can be a difficult process. To help, the National Institute on Drug Abuse has created [Seeking Drug Abuse Treatment: Know What To Ask](#). This brief guide explores five important questions to ask when searching for a treatment program and explains what the research suggests is most effective. This free booklet offers valuable information for individuals, families, and friends seeking a treatment program.

Training & Events

Webinar: Recent Developments in FDA's Emergency Authority

The American Society of Law, Medicine and Ethics is [offering a webinar](#) on Thursday, March 15, 2012 from 1:00 - 2:00 p.m. (EST). Attorneys from the Federal Drug Administration's (FDA) Office of Counterterrorism and Emerging Threats will discuss legal authorities related to medical countermeasures. Presenters will also address the potential impact of the reauthorization of the Pandemic and All-Hazards Preparedness Act on FDA's emergency authority.

New Online Course Content Explores FDA Regulatory Process

The U.S. Cochrane Center at the Johns Hopkins Bloomberg School of Public Health has launched a new module for its online course Understanding

Evidence-based Healthcare: A Foundation for Action, which covers the Food and Drug Administration (FDA) regulatory process. The new "[Spotlight Session](#)" focuses on the history of drug regulation and the fundamentals of how drugs are approved in the U.S., providing real-life examples. The course module is available free of charge.

Field Epidemiology Resources from UNC CPHP

The [UNC CPHP Training Web Site](#) offers more than 180 short trainings on applied epidemiology topics, disease surveillance, disaster planning and response, and other public health preparedness topics. Trainings are based on several national competency sets including the CDC/CSTE Applied Epidemiology Competencies. Various types of continuing education credits are provided free of charge for many training modules. Also available are [Ready-to-use training packages](#) from UNC CPHP include a training program for local health department epidemiology response teams as well as several training programs for public health staff without formal epidemiological training. One of the most popular ready-to-use training packages is the basic epidemiology training series: E is for Epidemiology. This training package is currently being revised and updated, and will be re-launched in coming months.

Enhancing Community Preparedness and Response to an Evolving Disaster: Introduction to the Transitional Management Model

Date: Monday, April 2, 2012, 10:00 am – 3:30 pm

Location: The Ohio Union, 1739 N. High St., Columbus, OH

Most communities address short-lived, well-defined disasters, such as fires or motor vehicle accidents, in an effective and efficient manner. Ill-defined or evolving events that may pose a threat to a community, such as an emerging infectious disease, pose challenges in planning and response. [This course](#) will introduce the learner to the Transitional Management Model (TMM), an approach to enable communities to prepare for and respond to an evolving disaster, in a coordinated manner. The TMM serves as the bridge between traditional medical care and the austere medical care associated with a catastrophic disaster. Learners will be able to apply TMM in table top exercises and experience its utility in planning and response.

Upon completion of this course the learner will be able to:

1. Compare the traditional response and the Transitional Management Model response to disaster
2. Describe the four levels of the TMM
3. Apply the TMM in a table top exercise simulating a pandemic

This workshop is recommended for individuals and teams of stakeholders responsible for public health emergency and disaster planning and response within a defined jurisdiction. Teams with representatives from public health agencies, hospitals, EMA, EMS, and non-traditional responder groups (such as faith-based organizations) are encouraged to participate.

Genesee County Health Department Public Health Week Conference

Location: Flint, MI

Date: April 3, 2012

The conference theme this year is "Community Based Public Health." The keynote speaker will be Camara Jones, MD, MPH, PhD, the Director of Research, Social Determinants of Health at the Centers for Disease Control and Prevention. For more information call (810) 768-7970 or visit www.gchd.us

Great Lakes Border Health Initiative (GLBHI) 8th Annual Conference

April 24, 2012, 8:30 am - 5:00 pm
Plymouth, MI

The GLBHI Annual Conference offers a unique opportunity to engage with international colleagues in infectious disease prevention and control along the Canada-U.S. border. Invitations to the conference are extended to local, state/provincial, Tribal/First Nation and federal stakeholders from Ontario and the Great Lakes states working in the areas of public health, clinical health, laboratories, food protection, and emergency management. Also invited are professionals from throughout Canada, Mexico, and the United States who want to learn more about cross-border public health initiatives. GLBHI Steering Committee and primary Subcommittees will be meeting the afternoon of April 23. Additionally, GLBHI will be co-hosting a food/feed emergency response exercise on April 23. Detailed information about the Conference is accessible on the GLBHI website at www.michigan.gov/borderhealth.

SAVE THE DATE!

Public Information Training

June 12-13, 2012

Ann Arbor, MI

Sponsored by the Office of Public Health Preparedness (OPHP), this training, featuring Peter Sandman and the Media Survival Group, is designed for Public Information Officers from the public health, hospital and emergency management communities. Detailed conference information will be forthcoming in future issues of the Guardian of Public Health.



Mailing Address:

Office of Public Health Preparedness
Capitol View Building - 201 Townsend Street - Lansing, MI 48913
(517) 335-8150 — <http://www.michigan.gov/ophp>



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